

The following **Listing of Claims** replaces all prior versions and listings of claims in this application.

1. (Previously presented) A method comprising:  
implementing a telecommunications application of an electronic device, said electronic device comprising one of a personal computer and a peripheral device for use with personal computers;  
sampling a telecommunications signal of said telecommunications application at a first sampling rate; and  
utilizing sound output of an entertainment sound adapter of said electronic device, said entertainment sound adapter output being sampled at a second higher sampling rate than said first sampling rate, said entertainment sound adapter output corresponding to a non-training audio application of said electronic device to train an acoustic echo canceller in a background of said telecommunications application.
2. (Previously presented) The method of claim 1, wherein the non-training audio application is an entertainment application, said entertainment sound adapter output includes program audio, and said entertainment application was not designed solely for training the acoustic echo canceller.
3. (Previously presented) The method of claim 2, wherein the entertainment sound adapter output comprising program audio of the entertainment application corresponds to streaming audio sound.
4. (Previously presented) The method of claim 1, wherein the electronic device is said personal computer and said non-training audio application of said electronic device comprises an entertainment application of said personal computer.

5. (Previously presented) The method of claim 1, wherein utilizing comprises performing sample rate conversion to match the second higher sample rate of the non-training audio application with the first sampling rate of the telecommunications application.

6. (Previously presented) The method of claim 1, wherein said electronic device includes a microphone and a speaker, the acoustic echo canceller includes an adaptive filter, a first path is formed from the speaker to the adaptive filter and a second path is formed from the microphone to the adaptive filter, and said utilizing comprises matching a delay of the first path with a delay of the second path.

7. (Previously presented) The method of claim 6, wherein said electronic device includes a processor, and utilizing further comprises minimizing use of the processor when a current load of the processor is above an average load threshold for the processor.

8. (Previously presented) The method of claim 7, wherein said minimizing comprises collecting audio data samples from one of the microphone and the speaker and restricting use of the adaptive filter until the current load of the processor is below the average load threshold for the processor.

9. (Previously presented) The method of claim 8, wherein restricting comprises:  
utilizing an adaptive counter to count a number of training calls to the acoustic echo canceller; and  
training the adaptive filter only when the number of training calls is greater than an adaptive filter comparison threshold.

10. (Previously presented) A method comprising:  
utilizing sound output of an entertainment sound adapter of an electronic device comprising one of a personal computer and a peripheral device for use with personal computers, said entertainment sound adapter output comprising audio that corresponds to a non-training audio application of said electronic device, said entertainment sound adapter output being utilized for training an acoustic echo canceller of said electronic device in a background of a

telecommunications application of said electronic device, wherein the entertainment sound adapter output that corresponds to the non-training audio application of said electronic device is a notification of an event unrelated to training of the acoustic echo canceller and comprises a sequence of frequencies including frequencies to train the acoustic echo canceller.

11. (Previously presented) The method of claim 10, wherein the event is one of an incoming call, an incoming e-mail message, an upcoming conference, an upcoming meeting, an error, a warning, and a request for input.

12. (Previously presented) An acoustic echo canceller comprising:  
an entertainment sound adapter of an electronic device, said electronic device comprising one of a personal computer and a peripheral device for use with personal computers, said electronic device having a telecommunications application involving sound sampled at a first sampling rate, and  
an adaptive filter adapted to be trained using sound comprising audio output of said entertainment sound adapter of said electronic device sampled at a second, higher sampling rate, wherein said audio output of said entertainment sound adapter corresponds to a non-training audio application for training said adaptive filter in a background of said telecommunications application.

13. (Previously presented) The acoustic echo canceller of claim 12, wherein the non-training audio application is an application that includes program audio, and was not designed solely for training the acoustic echo canceller.

14. (Previously presented) The acoustic echo canceller of claim 13, wherein the non-training audio application comprising program audio corresponds to streaming audio and said non-training audio application comprises an entertainment application of said electronic device different from said telecommunications application of said electronic device.

15. (Previously presented) The acoustic echo canceller of claim 12, wherein the electronic device is said personal computer.

16. (Previously presented) The acoustic echo canceller of claim 12, further comprising a sample rate conversion device for performing sample rate conversion to match the second higher sample rate of the non-training audio application with the first sampling rate of the telecommunications application, said telecommunications application being different from said non-training audio application of said electronic device.

17. (Previously presented) The acoustic echo canceller of claim 12, wherein the electronic device includes a microphone and a speaker, a first path is formed from the speaker to the adaptive filter and a second path is formed from the microphone to the adaptive filter, and the acoustic echo canceller further comprises a delay matching buffer for matching a delay of the first path with a delay of the second path.

18. (Previously presented) The acoustic echo canceller of claim 12, wherein said electronic device includes a processor, and the acoustic echo canceller further comprises means for minimizing use of the processor when a current load of the processor is above an average load threshold of the processor.

19. (Previously presented) The acoustic echo canceller of claim 18, wherein the electronic device includes a microphone and a speaker, the acoustic echo canceller further comprises:

- means for collecting audio data samples from one of the microphone and the speaker; and
- means for restricting use of the adaptive filter until the current load of the processor is below the average load threshold of the processor.

20. (Previously presented) The acoustic echo canceller of claim 19, wherein said means for restricting comprises:

- an adaptive counter for counting a number of training calls to the acoustic echo canceller;
- means for comparing the number of training calls to an adaptive filter comparison threshold, and

wherein the adaptive filter is trained only when the number of training calls is greater than the adaptive filter comparison threshold.

21. (Previously presented) An acoustic echo canceller comprising:  
an adaptive filter adapted to be trained using sound comprising audio that corresponds to a non-training audio application; and  
an entertainment sound adapter of an electronic device coupled to said adaptive filter for outputting audio sound of said non-training audio application;  
wherein the output audio sound that corresponds to the non-training audio application is a notification of an event unrelated to training of the acoustic echo canceller and comprises a sequence of frequencies including frequencies to train the acoustic echo canceller.

22. (Previously presented) The acoustic echo canceller of claim 21, wherein the event is one of an incoming call, an incoming e-mail message, an upcoming conference, an upcoming meeting, an error, a warning, and a request for an input.

23. (Previously presented) A method comprising:  
implementing a telecommunications application of a computer having a telecommunications signal sampled at a first sampling rate;  
receiving sound output of an entertainment sound adapter from the computer at an acoustic echo canceller in a peripheral device of said computer via one of a USB interface and an IEEE 1394 interface between said computer and said peripheral device, the entertainment sound adapter output corresponding to a non-training audio application, said entertainment sound adapter output being sampled at a second sampling rate, said second sampling rate being higher than said first sampling rate;  
utilizing the entertainment sound adapter output that corresponds to the non-training audio application to train the acoustic echo canceller in the peripheral device in a background of said telecommunications application; and  
performing echo canceling, during the telecommunications application implemented by the computer, using the acoustic echo canceller in the peripheral device.

24. (Previously presented) The method of claim 23, wherein the non-training audio application is an entertainment application that includes program audio, and was not designed solely for training the acoustic echo canceller.

25. (Previously presented) The method of claim 23, wherein the entertainment sound adapter output that corresponds to the non-training audio application is a notification of an event unrelated to training of the acoustic echo canceller and comprises sequence of frequencies including frequencies to train the acoustic echo canceller.

26. (Previously presented) The method of claim 25, wherein the event is one of an incoming call, an incoming e-mail message, an upcoming conference, an upcoming meeting, an error, a warning, and a request for an input.

27. (Previously presented) The method of claim 1, wherein said electronic device comprises a processor, the method further comprising  
operating said non-training audio application for training the acoustic echo canceller so long as a processing load on said processor of said electronic device is less than an average load of said processor of said electronic device.